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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,248	07/06/2001	Duane Joseph Buening	DP-302682	5981

7590 10/24/2002
MARGARET A. DOBROWITSKY
DELPHI TECHNOLOGIES, INC.
Legal Staff, Mail Code: 480-414-420
P.O. Box 5052
Troy, MI 48007-5052

EXAMINER

LE, DANG D

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 10/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/900,248

Applicant(s)

BUENING ET AL.

Examiner

Dang D Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 23 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 and 3-10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 10 is objected to because of the following informalities: replace "edge" at line 4 with -- side --. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1 and 3-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inagaki et al. in view of Kometani et al. (6,433,455).

Regarding claim 1, Inagaki et al. show an alternating current (AC) generator including an armature core having a plurality of teeth (11) separated by intervening slots with a slot pitch, at least one multiphase winding disposed on said armature core, and a rotor disposed in said armature having a plurality of pairs of rotor poles (Figures 6 and 7) and configured to rotate with a shaft, said shaft having an axis associated therewith, each pair respectively configured for energization in opposite magnetic polarity, said poles comprising a trapezoidal shape having a base, a leading side (right side in Figures 6 and 7), a trailing side (left side), and a tip side, said trailing side is a straight line between the tip side and the base.

Inagaki et al. do not show said leading side having a plurality of portions in an axial direction, wherein said leading side has a first portion extending from the tip side sloping at a first rate, said leading side having a second portion extending from said first portion sloping at a second rate less than said first rate.

Kometani et al. show said leading side having a plurality of portions (Figures 1 and 2) in an axial direction, wherein said leading side has a first portion extending from the tip side sloping at a first rate, said leading side having a second portion extending from said first portion sloping at a second rate (angle α) less than said first rate (angle β) for the purpose of increasing output at low speed.

Since Inagaki et al. and Kometani et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include in the leading side with a plurality of portions in an axial direction, wherein said leading side has a first portion extending from the tip side sloping at a first rate, said leading side having a second portion extending from said first portion sloping at a second rate less than said first rate as taught by Kometani et al. for the purpose discussed above.

Regarding claims 3, 4, 6 and 7, it is noted that Kometani et al. do not show the first portion sloping between about one and two slot pitches and said second portion sloping between about one-half and one and one-half slot pitches or said first portion sloping about one slot pitch, said second portion sloping about three-quarters slot pitch.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the first portion with a slope between one and two slot pitches and said second portion between one-half and one and one-half slot pitches or said first portion with one slot pitch, said second portion with three-quarters slot pitch, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 5, it is noted that Inagaki et al. also show said tip side being offset relative to said base and Kometani et al. also show said leading edge having a

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first portion extending from said tip sloping at a first rate, said leading side having a second portion extending from said first portion sloping at a second rate less than said first rate.

Regarding claim 8, it is noted that Inagaki et al. also show said offset being in a direction of rotation of said rotor.

Regarding claim 9, this claim is a combination of claims 1 and 3. As a result, it is also rejected.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inagaki et al. in view of Kometani et al. (6,433,455) as applied to claim 9 above, and further in view of Kusase et al.

Regarding claim 10, the generator of Inagaki et al. modified by Kometani et al. includes all of the limitations of the claimed invention with a three-phase winding, the trailing side being disposed at an incline relative to the axial extent of the teeth of the armature, the trailing side extending in parallel with the leading edge of an adjacent pole of a predetermined length (Figure 2, Kometani et al.) except for the generator including 72 teeth and six pairs of poles.

Kusase et al. show the generator including 72 teeth and six pairs of poles for the purpose of reducing noise.

Since Inagaki et al., Kometani et al. and Kusase et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

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It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the generator with 72 teeth and six pairs of poles for the purpose of reducing noise as taught by Kusase et al. for the purpose discussed above.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information on How to Contact USPTO

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (703) 305-0156. The examiner can normally be reached on Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

DDL
October 21, 2002

NC

